



# Collapsible Trash Bag Frame

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## TOOLS:

- [3 16" twist bit \(1\)](#)
- [Drill \(1\)](#)
- [Paper towels \(1\)](#)
- [Plastic pipe cutter \(1\)](#)
- [Tape measure \(1\)](#)
- [Wire cutters side cutters \(1\)](#)

## PARTS:

- [126" nominal 1 2" Flex-Plus blue plastic electrical nonmetallic tubing \(1\) "conduit"](#)
- [48" nominal 1 2" PVC pipe \(1\)](#)
- [pcs 1 2" PVC "tee" fittings unthreaded \(4\)](#)
- [pc 1 2" PVC straight coupling unthreaded \(1\)](#)
- [pc broom clips size medium \(3\)](#)
- [24" 6 ball chain \(1\)](#)
- [pcs 6 "eye" ball chain fittings \(6\)](#)
- [Acetone \(1\)](#)
- [Clear PVC cement \(1\)](#)

## SUMMARY

Trash cans have always sort of annoyed me. They take up so much space, especially if, like me, you favor large cans to minimize the number of trips to the dumpster each week.

There's no practical way to pack a large trash can for storage or transport. If you're moving,

of course, you can fill the can with lightweight stuff like dirty clothes or something, but only if you're willing to expose your linen to the inside of your trash can. I always use trash bags, anyway, and for my money if you use a bag the only major function of the can is to hold the bag open. Well, it's possible to achieve that same function with a much cheaper, lighter, and more compact device.

It's also handy around the lawn and/or garden, to hold a bag open for clippings, and is in fact based on a commercial device marketed for that purpose. This one is better, and you can make it yourself for less.

This how-to covers a slightly refined version of [my original design](#), with one of its three legs removed in order to facilitate removing a full bag of trash from the frame. Also, some of the joints have been selectively glued in order to prevent annoying pop-outs without sacrificing collapsibility, and a simpler means of attaching the retaining clips has been devised.

This design is sized to accept 32 gallon trash bags.

## Step 1 — Cut parts to length



- Measure and mark the following lengths:
  - 1 x 50" length ("long"), 1 x 25" length ("medium"), and 3 x 17" lengths ("short") conduit
  - 2 x 24" length pipe
  - 3 x 8" ball chain
- The plastic pipe cutter will snip right through the conduit in one stroke. To cut the pipe, apply pressure and rotate steadily, like a metal tubing cutter, and it will slice neatly in 10 turns or so. Use wire cutters on the ball chain.
- If the conduit gives you grief because of its tendency to coil, try marking the lengths you want to cut lightly on a door frame in pencil. Then flatten the conduit against the door so you can measure and mark the length accurately.

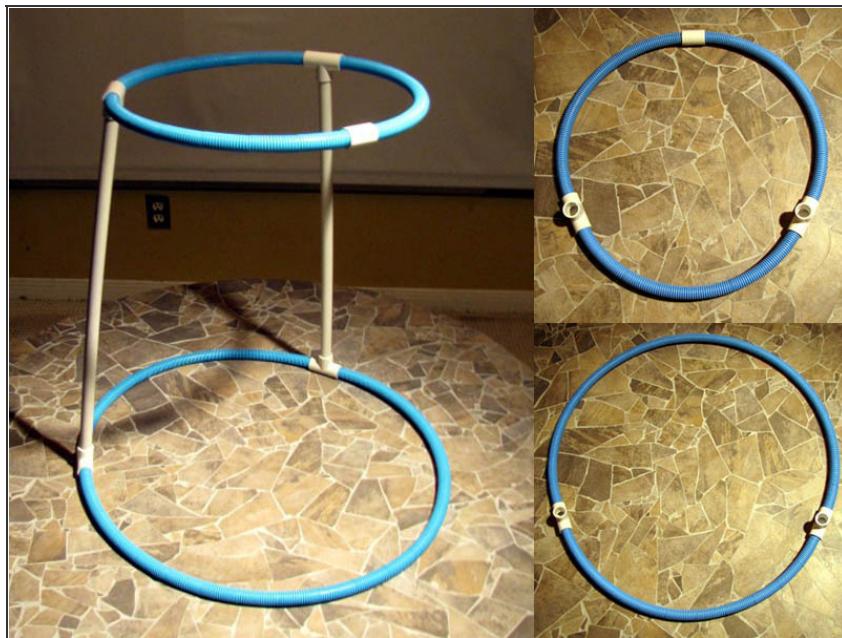


## Step 2 — Clean up the pipe (optional)



- If you're picky about appearances, clean the factory ink off the outside of the pipes and pipe fittings using a paper towel and a touch of acetone.

### Step 3 — Test assembly



- Don't glue anything yet! 
- The bottom ring consists of the long conduit joined to the medium conduit in a circle with two "tee" fittings, as shown. The side openings of the "tee" fittings should point perpendicularly away from the plane of the circle, in the same direction.
- The top ring consists of the three short conduits joined in a circle. One of the three joints is a "straight" fitting, while the other two are "tee" fittings. As before, the side openings of the "tee" fittings should point perpendicularly away from the plane of the circle, in the same direction.
- Join the top ring to the bottom ring using the two lengths of pipe as shown. Adjust the angle of the "tee" fittings as needed to center the top ring over the bottom ring.

## Step 4 — Glue the ring parts together



- Following the label directions on your cement, glue every conduit end into its joint.
- Allow the cement time to set.
- Do not apply glue to the pipe ends, as these are the demountable joints that allow the frame to collapse for storage or transport.



## Step 5 — Drill holes for clip retaining chains



- Once the glue dries, remove the top ring and drill a  $3/16"$  hole through each of its three fittings (two "tees" and one "straight"), as shown.
- Drill through both sides of the fitting.



## Step 6 — Attach retaining clips and chains



- Attach an eye coupling to one end of a length of ball chain.
- Fish the other end through both holes in one of the PVC fittings, and thread the free end through the eye coupling at the other.
- String a second coupling onto the chain, as shown.
- Thread the free end of the chain through the hole in a broom clip, wrap it back around, and attach it to the loose coupling.
- Repeat twice more for the other two clips and chains.

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The frame is knocked down for storage or transport by removing the top and bottom ring assemblies from the two pipe uprights. The joints between the pipes and the "tee" side-arms could be lubricated with petroleum jelly if this is difficult for you. Personally, I've found it's pretty easy to disassemble the frame by holding the bottom ring against the floor with my feet while pulling up on the pipe with my arms.

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